

REMARKS

Applicants acknowledge the allowability of Claim 3 if rewritten in independent form. Claim 3 has been so amended and Claim 3 and Claim 4, dependent therefrom, are believed to be in allowable form.

Applicants' invention, as now defined in amended Claim 1, which incorporates the subject matter of Claim 2 therein, is to an electronic component wherein a lead frame is attached to an element with an electrically conductive adhesive, the electronic component being characterized in that the lead frame has an adhesive filling portion formed at a part thereof having a lower surface opposed to the element, the adhesive filling portion being one of a hole, cavity, cutout and groove formed in the lead frame, the filling portion having an inside thereof filled with the conductive adhesive.

Such an electrical component is not taught or suggested in the references cited.

Claims 1, 2 and 4 have been rejected as anticipated by Nakagawa et al. (U.S. 6,046,902). The Office Action alleges that Nakagawa shows an electric component with a lead frame attached to an element with an electrically conductive adhesive 8 and that the lead frame has an adhesive filling portion (referring to Fig. 8) found at a part having a lower surface opposed to the element, which filling portion is filled with the conductive adhesive.

Applicants believe that the Office Action has mischaracterized the Nakagawa teachings. The adhesive 8 is not filled in a filling portion such as a hole or groove as in the present claimed component. In Figs. 6-8 of the reference, items 310 and 320 are protrusions on the first and second legs 7 and 9. The

conductive material 8 is not in any holes or grooves but rather is in a gap formed between the first protruding section and terminal electrode 33 or 3 (see col. 8, lines 35-43).

In Claim 1, as now amended, the present adhesive filling portion is a hole, cavity, cutout or groove formed in the lead frame.

Claims 1, 2 and 4 are also rejected as anticipated by Aoyama (U.S. 6,188,566). The Office Action alleges that Aoyama shows an electric component with a lead frame attached to an element, with an electrically conductive adhesive (7-resin and melted portion?). It is alleged that the lead frame has an adhesive filling portion 6 filled with a conductive adhesive.

As Applicants understand Aoyama, the throughhole 6 is filled with an arc-extinguishing material 7 capable of sucking metallic material when it is melted. The arc-extinguishing material 7 is preferably quartz sand (Si O_2) (Col. 3, line 64) or a silicone resin (Col. 4, line 2), which are not a conductive adhesive as called for in present Claim 1. Apparently, the Office Action alleges that after the arc-extinguishing material absorbs metal in Aoyama, this would be the same as a conductive adhesive as called for in the present claims. However, the arc-extinguishing material 7 of Aoyama is not a conductive adhesive as called for in amended Claim 1. Also, when the Aoyama capacitor is complete, there is a gap 9 between the material 7 and the silver paste 8 and no conductivity could be present. New dependent Claims 5-7 are added to cover specific embodiments of the invention.

In view of the present amendments to the claims and the above remarks, Applicants' Claims 1 and 3-7 are believed to be patentable and early action towards allowance thereof is respectfully requested.

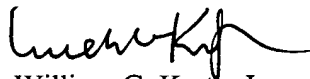
U.S. Patent Application Serial No. 10/725,576
Reply to OA dated January 25, 2005

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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